

WHAT IS CLAIMED IS:

1. An operation microscope having a microscope
body including an optical eyepiece system for
stereoscopically observing an operative portion of
5 a surgical operation, said microscope comprising:

a microscope image observer for observing an
observation image formed for stereoscopic observation
by the microscope body;

10 a plurality of image forming sections for forming
images other than the observation image of said
microscope image observer;

an image display for selectively displaying the
respective images of said plurality of image forming
sections in said microscope image observer;

15 a display driver for controlling display states of
the plurality of images formed by said plurality of
image forming sections independently of one another;
and

20 a controller for controlling an operation of the
display driver.

2. The operation microscope according to claim 1,
wherein said image display comprises:

an in-field display for displaying the image of
any one of said image forming sections in a field of
25 the observation image of said microscope image
observer; and

an out-of-field display for displaying the image

of said image forming section other than the image of said in-field display outside the field of the observation image of said microscope image observer.

3. The operation microscope according to claim 2,
5 wherein said in-field display is formed by a small screen display, formed by cutting a part of the field of the observation image of said microscope image observer, for displaying another image formed by said image forming section in the cut part.

10 4. The operation microscope according to claim 2, wherein said in-field display is formed by an image superimposing section for superimposing and displaying the image other than said observation image in the field of the observation image of said microscope image
15 observer.

5. The operation microscope according to claim 2, wherein said in-field display comprises:

a small screen display, formed by cutting a part of the field of the observation image of said
20 microscope image observer, for displaying another image formed by said image forming section in the cut part;
and

an image superimposing section for superimposing and displaying the image other than said observation
25 image and the display image of said small screen display in the field of the observation image of said microscope image observer.

6. The operation microscope according to claim 1, wherein said image display comprises:

an in-field display for displaying the image of any one of said image forming sections in a field of the observation image of said microscope image observer, and

said in-field display comprises:

a small screen display, formed by cutting a part of the field of the observation image of said microscope image observer, for displaying another image formed by said image forming section in the cut part; and

an image superimposing section for superimposing and displaying the image other than said observation image and the image of said small screen display in the field of the observation image of said microscope image observer.

7. The operation microscope according to claim 1, wherein said display driver comprises:

an image selector for selecting respective display images of said plurality of image forming sections;

a display controller for displaying the image selected by said image selector in said corresponding image display; and

an operation input section for operating said display controller and the image selector.

8. The operation microscope according to claim 7,

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10. The operation microscope according to claim 5,
wherein said display driver comprises an XY driver for

driving said small screen display in an XY direction in XY coordinates crossing at right angles to each other in the field of the observation image of said microscope image observer, and

5 said controller comprises:

 an XY direction operation switch for operating said XY driver in said XY direction;

 an image selection switch for selecting the respective images of said plurality of image forming sections; and

10 a display selection switch for selecting said image display.

11. The operation microscope according to claim 7, wherein said image forming section comprises a nerve monitor for inspecting a function of a cranial nerve, and displaying an inspection result with a waveform, and

15 said image selector comprises waveform monitor means of said nerve monitor, and changes a display state of said nerve monitor in accordance with a state of the waveform monitor means.

12. The operation microscope according to claim 3, wherein said microscope is connected to an external operation input section disposed outside an operating theater, and comprises a data transmitter for displaying an instruction from said external operation input section in said small screen display.

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a holder fixing section for fixing a moving position of the holder in such a manner that the moving

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18. The operation microscope according to claim 17, wherein said display driver comprises a display for displaying an identification mark in the image to which the function of said foot switch is allotted in accordance with the image source selected by said in-field display.

19. The operation microscope according to claim 6, wherein said microscope body comprises an endoscope holding hook for holding an endoscope so that the endoscope is attachable or detachable, and

5 said display driver detects whether or not said endoscope is held by said endoscope holding hook and controls said image display.

20. The operation microscope according to claim 2, wherein said image forming section comprises a scale display for calculating an image scale of said
10 endoscope and displaying the image scale in said in-field display.

21. The operation microscope according to claim 20, wherein said scale display calculates a scale
15 of the observation image of said microscope image observer and overlays and displays the scale in the observation image of said microscope image observer.

22. The operation microscope according to claim 20, wherein said scale display comprises
20 a stereoscopic index display for displaying a stereoscopic index in said in-field display.

23. The operation microscope according to claim 9, wherein said image forming section displays an image of
25 an ultrasonic probe and said navigation image in said image display with a progress of the surgical operation when said ultrasonic probe is used.

24. The operation microscope according to

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